



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/573,986

09/06/2006

Joseph Da Cruz

13694/100001

1795

23838 7590 06/30/2008

KENYON & KENYON LLP
1500 K STREET N.W.
SUITE 700
WASHINGTON, DC 20005

EXAMINER

MAI, HAO D

ART UNIT

PAPER NUMBER

3732

MAIL DATE

DELIVERY MODE

06/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/573,986	Applicant(s) DA CRUZ, JOSEPH	
	Examiner HAO D. MAI	Art Unit 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 0907/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 3732

DETAILED ACTION

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Australia on 10/03/2003. It is noted, however, that applicant has not filed a certified copy of the foreign application as required by 35 U.S.C. 119(b).

Drawings

2. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because:

- Figures 1-14 are of color and/or black-and-white photographs that do not transfer well (or at all) through scanning, and thus are not of sufficient quality to permit thorough examination.
- Figures 15-29 are informal drawings that contain numerous informalities, e.g. there is no detailed description for Figure 18 in the specification, it is unclear exactly which cross-section(s) of the invention are being shown in Figures 20-22, etc.

Accordingly, replacement drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to this Office action. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 25-29, and 41-43, rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 3732

- Claim 25 recites "left, right and anterior directions", and claim 26 recites the "left side" and "rightward". Such relative recitations of right and/or left render indefiniteness because it is unclear exactly what the applicant is trying to claim for a left or right direction as there is no clear reference point.
- Claim 26 recites "the arch" (line 4 of claim 26), which lacks sufficient antecedent basis. Note that the recited "arch" may refer to either the arch of teeth or the arch wire.
- Claim 41 recites relative language of "outwardly", "forwardly", "inwardly", "outwardly behind", etc., which renders indefiniteness as there is no clear reference point.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chikami (6,332,774).**

Regarding claim 36, Chikami discloses a removable orthodontic appliance (Fig. 7) having a base 1 for locating inside of an arch of a wearer's teeth and an arch wire 2 coupled to the base; wherein an outer surface of the base 1 is contoured for contact with inner surfaces of the teeth. When in use, the arch wire extends around an outer periphery of a set of the wearer's teeth. Chikami further discloses the interconnection 3 between the arch wire and base; the interconnection however is somewhat touching the most posterior teeth. Nevertheless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to

Art Unit: 3732

modify Chikami by relocating the interconnection 3 between the base and the arch wire more towards the posterior and center of the base such that the interconnection do not touch the teeth so that it would irritate and/or damage the wearer's teeth. Such rearrangement of parts/connections is merely a design choice well within the skill of an artisan obtained via routine experimentation in order to achieve optimum results. *In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950). MPEP 2144.04.

As to claims 37-38, Chikami discloses the arch wire to extend from one side posterior portion of the base to the other side posterior portion of the base, and contacting with the outer surfaces of the set of teeth along an outside of the teeth arch.

Regarding claim 39, Chikami discloses all the claimed elements as detailed above with respect to claim 36. In particular, Chikami further discloses anterior wires 2 or springs 2a capable of urging forward the wearer's anterior teeth (Figs. 7-8).

7. Claims 24, and 26-35, and 41-43, are rejected under 35 U.S.C. 103(a) as being unpatentable over Chikami (6,332,774) in view of Fisher (4,026,023).

Regarding claim 24, Chikami discloses all the claimed elements as detailed above with respect to claim 36 except for an expansion screw. Fisher discloses a removable orthodontic appliance having a base with two parts and an expansion screw 32 (Fig. 2) for expanding the base. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Chikami by substituting Chikami's base with Fisher's two-part base with an expansion screw so that the base can be expanded as it adjust to the new position(s) of the teeth.

As to claims 26-27, and 29, Chikami discloses the continuous arch wire extending rearwardly from one side posterior portion of the base to the other side posterior portion of the

Art Unit: 3732

base, contacting the outer surfaces of the set of teeth along an outside of the arch of teeth (Fig. 7). As to claim 28, the dental appliance as disclosed by Chikami is capable of being used for the upper jaw. As to claims 30-32, Figure 11 shows the arch wire incorporating four U-loops 2a (the other two is located on the other side) and a C-clasp 3 is coupled to the arch wire at only one end portion of the C-clasp. As to claims 33-35, base 1 is capable of being an anterior and/or posterior bite plane, i.e. the upper teeth can bite on the base if it is located at the lower jaw, and the lower teeth can bite on the base if it is located at the upper jaw.

Regarding claims 41-43, Chikami discloses the invention substantially according to claim 40; Chikami and Fisher in combination disclose all the claimed elements as detailed above with respect to claims 24. In particular, Fisher discloses a removable orthodontic appliance having a base with a first /left and second/right lingual portions being held apart by the resilient member of expansion screw 32 (Fig. 2). The first/left and second/right lingual portions each is contoured for contact with the inner surfaces of a first/left and second/right set of teeth, respectively. Fisher also discloses a first arch wire 34A and second arch wire 34B, each extending continuously from the posterior portions of the respective lingual portions and in contact with the outer surfaces of the respective set of teeth (Fig. 2).

8. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chikami (6,332,774) in view of Fisher (4,026,023), and further in view of Aagesen (5,002,485).

Chikami/Fisher disclose the invention substantially according to claim 24. However, Chikami/Fisher fails to disclose a 3-way expansion screw mechanism (claim 25).

Aagesen discloses an orthodontic appliance having a three-part base 12/14/16 with a 3-way expansion screw mechanism 20 capable of enlarging the maxilla of the wearer in left, right, and anterior directions (Figs. 1-2). It would have been obvious to one having ordinary skill

Art Unit: 3732

in the art at the time the invention was made to modify Chikami/Fisher by including the three-part base with the 3-way expansion screw mechanism so that the base may be expanded in three directions as explicitly taught by Agesen.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAO D. MAI whose telephone number is (571)270-3002. The examiner can normally be reached on Monday-Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached on (571) 272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/Hao D Mai/
Examiner, Art Unit 3732**

**/John J Wilson/
Primary Examiner, Art Unit 3732**